



Instructions for Completing a Permit Application for Programs Administered by the Inland Water Resources Division Including:

- **Inland Wetlands and Watercourses Permit**
- **Stream Channel Encroachment Line (SCEL) Permit**
- **401 Water Quality Certification**
- **Water Diversion Permit**
- **Dam Construction Permit**
- **Flood Management Certification Approval**

Use these instructions to: 1) complete the permit application form DEP-IWRD-APP-100, 2) prepare supporting documents, and 3) publish the applicant's notice of permit application. These instructions are not a substitute for the requirements of the relevant statutes and any regulations thereunder. You should review all applicable laws prior to completing this application. Remember, it is your responsibility to comply with all applicable laws.

Introduction

The Inland Water Resources Division (IWRD) of the Department of Environmental Protection's (DEP) administers six permit programs pertaining to the use of land and water resources. The purpose of these programs is to conserve and protect the water and natural resources of the state and to protect life and property from flood hazards. For any questions you may have regarding application requirements, call the IWRD at 860-424-3019.

Who Needs a Permit?

Inland Wetlands and Watercourses: Any person proposing to perform any activity in or affecting a wetland or watercourse must obtain a permit prior to conducting the activity. Such activities are regulated by DEP when performed by a state agency or instrumentality, except a local or regional board of education; all other activities in or affecting a wetland or watercourse are regulated by each town's municipal wetlands agency.

SCEL: Prior to placing any encroachment or obstruction riverward of a SCEL established by

DEP under Section 22a-342 of the Connecticut General Statutes (CGS), a permit must be obtained. The following are examples of regulated activities for which a SCEL permit is needed: construction of structures; excavation or deposition of material; land clearing and grading; and substantial maintenance or repair of non-conforming structures (e.g., buildings that existed when the encroachment lines were adopted). DEP has designated about 270 miles of floodplain throughout the state on "SCEL maps". These maps are on file in the Town Clerk's Office in the affected town. The maps and an index to the maps are also available from DEP. Please contact IWRD at 860-424-3019 for further information.

401 Water Quality Certification: Any applicant for a federal license or permit for an activity which may result in a discharge into the waters of the United States, including wetlands, must obtain a certification from DEP that such discharge will comply with the applicable provisions of the Federal Water Pollution Control Act, as amended, and Connecticut's Water Quality Standards. Examples of federal licenses and permits for which

water quality certification is required include U.S. Army Corps of Engineers Section 404 dredge and fill permits, Coast Guard bridge permits, and Federal Energy Regulatory Commission (FERC) permits for hydropower and gas transmission facilities.

Water Diversion: Any person proposing to conduct activities which cause, allow or result in the withdrawal from, or the alteration or modification of the waters of the state must obtain a water diversion permit unless the activity is registered (grandfathered) or is exempted from water diversion permit requirements under CGS Section 22a-377 or Section 22a-377(b)-1 of the Regulations of Connecticut State Agencies (RCSA). A water diversion permit is generally required to: withdraw groundwater in excess of fifty thousand (50,000) gallons of water during any twenty-four hour period; withdraw surface water (including skimming of flood flows) in excess of fifty thousand (50,000) gallons during any twenty four hour period; collect stormwater runoff from a drainage area greater than 100 acres; construct or otherwise modify roadway crossings or culverts which provide detention or retention of watercourse flows; relocate, retain, detain, bypass, channelize, pipe, culvert, ditch, drain, fill, excavate, dredge, dam, impound, dike, or enlarge waters of the state; transfer water from one water supply distribution system to another where the combined maximum withdrawal from any source supplying the system or interconnected systems exceeds fifty thousand (50,000) gallons during any twenty-four hour period; or alter or modify a registered diversion.

Dam Construction: Prior to constructing a new dam, dike, reservoir or similar structure or repairing, altering or removing an existing dam, dike, reservoir or similar structure, a dam construction permit pursuant to CGS Section 22a-403 must be obtained, unless DEP determines that a dam construction permit is not required. In order to make that determination, the applicant must, prior to applying for a permit, submit a plan outlining the proposed work to:

INLAND WATER RESOURCES DIVISION
DAM SAFETY SECTION
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

Any work (other than routine maintenance), on a dam which, by breaking away or otherwise might endanger life or property, will require a dam construction permit. If DEP, after reviewing the proposed work, concludes that the dam would pose no threat to life or property should it fail, the applicant will be informed that a CGS Section 22a-403 dam construction permit is not required and that a municipal wetlands permit may be required.

Flood Management Certification: Prior to engaging in, or funding any activity which is within or affects a floodplain or which affects stormwater flow, a state agency must certify, and obtain approval of such certification, that the activity would conform with Connecticut's floodplain management standards and criteria. The disposition of state lands or buildings located in a floodplain must also be certified.

Please be aware that your proposed activities may require additional permits from regulatory agencies other than DEP, i.e., municipal wetlands agencies and the U.S. Army Corps of Engineers (1-800-343-4789). Such agencies should be contacted directly.

Any person proposing to transfer a DEP permit must submit a completed *Permit Transfer Form* (DEP-APP-006) and transfer fee to DEP. The *Permit Transfer Form* may be used for changes in owners and operators of the licensed activity; if other changes are proposed to the facility, the site, and/or to facility operations, the proposed transferee must also request a permit modification. For further information concerning permit transfers or to obtain a *Permit Transfer Form*, please contact the Permit Assistance Office at 860-424-3003.

How to Apply

Your permit application must include all of the following items:

- *Permit Application Transmittal Form* (DEP-APP-001)
- The required initial fee (check or money order payable to “Department of Environmental Protection”)
- *Permit Application for Programs Administered by the Inland Water Resources Division* (DEP-IWRD-APP-100)
- Documentation Form(s) (*Attachments C, D, E, F, and H*)
- Additional Supporting Documents

You must submit the above materials together as a complete package to:

CENTRAL PERMIT PROCESSING UNIT
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

When submitting your permit application, label your supporting documents as directed on your application form and always include, on each document, the applicant’s name as indicated on the *Permit Application Transmittal Form*. When additional space is necessary to answer a question stated on the application form, please insert additional sheets into the form immediately following the page on which the question was asked. Label each sheet with the applicant’s name as indicated on the *Permit Application Transmittal Form*, along with the corresponding part number and question number indicated on the permit application form. You should retain a copy of all documents for your files.

Notice of Permit Application

(Note: applicants for Flood Management Certification Approval are not required to publish Notice of Permit Application.)

CGS Section 22a-6g imposes public notification requirements on applicants for certain permits issued by DEP.

In order to comply with these requirements, you must:

1. Publish notice of the permit application immediately after you submit your application to DEP. This notice must follow the format appearing at the end of these notice instructions and must be published in a newspaper of general circulation in the area potentially affected by the activity which is the subject of your permit application.
2. Send a copy of the notice to the chief elected official of the municipality in which the regulated activity is proposed. The chief elected official is generally the mayor, 1st selectman, or the chairman or president of the town council, depending on the form of government of the municipality. Specific information for each municipality is listed in The State Register and Manual (often referred to as the Blue Book), which is available on the Secretary of the State’s website at <http://www.sots.state.ct.us>, and is also usually available at town clerk’s offices, the State Library and public libraries. If you have questions, you can call the Secretary of the State’s office at 860-509-6138, the town clerk of the appropriate municipality, or DEP’s Permit Assistance Office at 860-424-3003 for the relevant information.
3. Attach a copy of the published notice to a completed *Certification of Notice Form - Notice of Application* (DEP-APP-005A) (provided with the application forms package). This form asks you to: a) specify the specific date and newspaper in which the notice was published; b) certify that the attached notice is a true copy; and c) list the municipal official(s) to whom the notice was provided. This form must be mailed to:

INLAND WATER RESOURCES DIVISION
DEPARTMENT OF ENVIRONMENTAL PROTECTION
79 ELM STREET
HARTFORD, CT 06106-5127

conduct. If you have any questions about this notice contact the IWRD at 860-424-3019 or 860-424-3706 for Dam Construction permits.

The format, provided at the end of these notice instructions, must be used when publishing notice of your application. The format contains instructions in brackets. You must insert the appropriate information to replace the instructions in the brackets. Be sure to *delete* all instructions that are specified in brackets, in bold and in uppercase type. When a choice is specified in brackets, do not include any of the words in brackets unless they specifically apply to the activity you intend to

Your application will not be processed until DEP receives the Certification of Notice Form - Notice of Application with the attached copy of the notice.

In addition, DEP may notify you that other forms of notice are required, including the posting of a sign in accordance with CGS Section 22a-6l.

Notice of Permit Application

Town(s): **[LIST ALL TOWNS IN WHICH THE REGULATED ACTIVITY IS LOCATED OR WILL HAVE AN AFFECT]**

Notice is hereby given that **[INSERT NAME OF APPLICANT]** (the “applicant”) of **[INSERT ADDRESS OF APPLICANT HERE]** has submitted to the Department of Environmental Protection an application under Connecticut General Statutes Section(s) **[SELECT ONLY THE STATUTE NUMBER(S) CORRESPONDING TO THE PERMIT(S) REQUESTED: 22a-39 (INLAND WETLANDS), 22a-342 (STREAM CHANNEL ENCROACHMENT), 22a-369 (WATER DIVERSION), 22a-403 (DAM CONSTRUCTION); AND 401 of the federal Water Pollution Control Act, 33 U.S.C. sec. 1341 (WATER QUALITY CERTIFICATION); NOTE: IF THE APPLICATION IS LIMITED TO JUST A REQUEST FOR WATER QUALITY CERTIFICATION, DELETE THE WORDS “CONNECTICUT GENERAL STATUTES” FROM THE ABOVE TEXT]** for a permit to **[SELECT ONLY THE TEXT THAT DESCRIBES THE PERMIT(S) REQUESTED IN THE APPLICATION - 22a-39: conduct an activity in a wetland or watercourse; 22a-342: place an obstruction or encroachment riverward of SCEL for the [INSERT NAME OF RIVER FOR WHICH ENCROACHMENT LINES WERE ESTABLISHED]; 22a-369: divert waters of the state; 22a-403: [SELECT APPROPRIATE TEXT: construct a new dam, repair a dam, alter a dam, remove a dam, or construct, repair or remove a dike]; SEC. 401: discharge into the waters of the state]**.

Specifically, the applicant proposes to **[INSERT A BRIEF DESCRIPTION OF THE PROPOSED ACTIVITY AND ITS PURPOSE]**. The proposed activity will take place **[INSERT THE STREET ADDRESS; IF THE ADDRESS DOES NOT HAVE A STREET NUMBER, GIVE THE SPECIFIC LOCATION OF THE PROPOSED ACTIVITY WITH REFERENCE TO A FIXED LANDMARK E.G., A ROADWAY INTERSECTION, BRIDGE OR OTHER STRUCTURE]**. The proposed activity will potentially affect: **[INSERT ANY NATURAL RESOURCES POTENTIALLY AFFECTED BY SUCH ACTIVITY (E.G., WETLANDS, WATERCOURSES BY NAME, GROUND WATERS, AIR, FOREST LAND, TIDAL WETLANDS)]**

Interested persons may obtain copies of the application from **[INSERT THE NAME, MAILING ADDRESS AND TELEPHONE NUMBER OF THE APPLICANT’S REPRESENTATIVE]**.

The application is available for inspection at the Department of Environmental Protection, Inland Water Resources Division, 79 Elm Street, Hartford, CT 06106-5127, telephone 860-424-3019, from 8:30am to 4:30pm Monday through Friday.

Permit Application Instructions

You can apply for one or more permits from the Inland Water Resources Division using a single form, DEP-IWRD-APP-100. You will need to complete different attachments to this application depending on which permits you are applying for.

Please read the application form and instructions carefully. They have been designed to obtain specific information and anything that is missing or unclear will cause delays in the review process. If you believe that the information requested does not apply to your specific project, explain, in the space provided, why you believe that is the case. Do not respond with “NA” (“not available” or “not applicable”); an “NA” response will deem your application insufficient and may cause your application to be returned. If a question or supporting document is only required for specific activities it will be noted on the application form and in the instructions.

Please be advised that these instructions are not a substitute for any state or federal statutes or regulations. Be sure to refer to the applicable statutes and regulations while completing your application.

Check the “Available Resources” section at the end of these instructions for assistance in obtaining guidelines, maps, etc. which are referenced in these instructions.

Part I: Application Type

Please indicate whether you are applying for a new permit, or for a renewal of an existing permit, or for a modification of an existing permit, by checking the appropriate box. A permit is deemed to be “existing” only if it has not yet expired on the date you file your application. Please provide the existing permit number and expiration date for renewals and modifications.

Part II: Permit Type and Fee Information

Please note: effective August 21, 2003 the fees have increased as shown on the application form. Check the applicable box for each permit requested in the submission, total the application fees and enclose a check for the required amount with the *Permit Application Transmittal Form*. If the applicant is a municipality, the 50% fee discount applies. If the application is for an Inland Wetlands and Watercourses permit, DEP will invoice any required fees. DEP will not process an application unless the required fees have been paid.

Note: For water diversion applications - The flows listed in this part of the permit application in million gallons/day (mgd) refer to the maximum quantity of water proposed to be withdrawn in any twenty-four hour period; the watershed area (in square miles) means the area of land surface draining to the downstream-most point of the proposed diversion.

Part III: Applicant Information

When completing this part, please use the following standards:

- *Name* - Provide the full, legal company/firm name. (If identifying an entity registered with the Secretary of the State, fill in the name exactly as it is shown on the registration.) If identifying an individual, provide the full legal name (include title and suffix) in the following format: Title (Ms, Dr, etc.); First Name; Middle Initial; Last Name; Suffix (Jr., PE, PhD, etc.).
- *Phone* - Unless otherwise indicated, the phone number provided should be the number where the individual can be contacted during daytime business hours.
- *Contact Person* - Provide the name of the specific individual within the company whom DEP may contact in connection with your application.
- 1. *Applicant* - Fill in the name and phone number exactly as it appears on the Permit Application Transmittal Form. In the case of an inland

wetlands and watercourses application on behalf of an individual, both business and home addresses and phone numbers are required.

2. Indicate the applicant's interest in the facility or property.
3. *Primary Contact* - If you have authorized a consultant, engineer or other agent to act for you during the processing of the permit application, complete this section. DEP will direct copies of all correspondence and inquiries to the primary contact.
4. *Attorney* - It is not required that an applicant be represented by an attorney or any other agent. If you do have this type of representation, complete this section.
5. *Facility or Property Owner* - If the applicant is not the owner of the affected facility or property, complete this section. For inland wetlands and watercourses permit applications only, both the business and home addresses and telephone numbers of the owner are required.
6. *Engineers or Consultants* - List engineers or consultants employed or retained to assist in preparing the application or to design or construct the proposed activity.

Part IV: Site Information

- 1a. *Facility Name and Address* - The facility or project name or number identified should be the name by which the facility or project is commonly known and/or may be uniquely identified. If the facility or project has not been given a name, describe the proposed activity (e.g., proposed dam or proposed subdivision, etc.). The information given as the location address should be the address of the property at which the proposed activity will take place. Include the street address and the municipality. If the property does not have a street number, describe the location in terms of the distance

and direction from an obvious landmark such as an intersection with another roadway, a bridge, or a river. For example, "... on the east side of River Street, approximately 1000 feet north of its intersection with Bear Swamp Road."

- b. *Tax Assessor's Reference* - Provide the Tax Assessor's Map, Block and Lot Number of the site. These numbers may be found on the most recent tax bill for the property or obtained from the tax assessor's office in the town in which the property is located.
- c. Provide the latitude and longitude, in degrees, minutes and seconds, of the approximate center of the facility or site of the proposed work. In addition, please indicate the method used to determine the latitude and longitude coordinates. There are a variety of methods of deriving latitude and longitude coordinates with the Global Positioning System (GPS) being the most accurate.
- d. Indicate the drainage basin number(s) for the basin(s) wherein the proposed activity will take place. Drainage basin numbers are delineated on a map compiled by the Connecticut Geological Natural History Survey and entitled "Natural Drainage Basins of Connecticut, 1981", as amended. See "Available Resources" section at the end of these instructions for assistance in obtaining this map.
- e. Indicate the flood insurance map panel number wherein the proposed activity will take place and include the date of the map(s) referenced. See "Available Resources" section at the end of these instructions for assistance in obtaining flood insurance maps.
- f. If applying for a SCEL permit, indicate the SCEL map number(s) wherein the proposed activity will take place, identify the property by how the property is referenced on the map, i.e., by owner's name, parcel number, located between two specific pins, etc. and include the

date of the map(s) referenced. See “Available Resources” section at the end of these instructions for assistance in obtaining SCEL maps.

2. *Coastal Management Act Consistency*

Activities within the state’s coastal area must be consistent with the Connecticut Coastal Management Act (CGS Sections 22a-90 through 22a-112). You may be required to complete a *Coastal Consistency Review Form* (DEP-APP-004) to demonstrate that the activity is consistent with the standards and policies of the Connecticut Coastal Management Act. To determine whether this requirement pertains to you, you must first decide if your activity is, or is proposed to be, located in either the coastal area or the coastal boundary.

The *coastal area*, as defined in CGS Section 22a-94 (a), includes the land and water within the following towns:

Branford	Guilford	Old Saybrook
Bridgeport	Hamden	Orange
Chester	Ledyard	Preston
Clinton	Lyme	Shelton
Darien	Madison	Stamford
Deep River	Milford	Stonington
East Haven	Montville	(Borough and Town)
East Lyme	New London	Stratford
Essex	New Haven	Waterford
Fairfield	North Haven	West Haven
Greenwich	Norwalk	Westbrook
Groton	Norwich	Westport
(City and Town)	Old Lyme	

The *coastal boundary*, as defined in CGS Section 22a-94(b), is a designated region within the coastal area. It is delineated on DEP-approved coastal boundary maps which are available for review at the DEP Office of Long Island Sound Programs (OLISP), the DEP File Room, and municipal offices of towns located in the coastal area. Copies of these maps may also be purchased from DEP Maps and Publications.

Activities within the coastal boundary:

If your activity is, or is proposed to be, located in the coastal boundary, you must complete a *Coastal Consistency Review Form* (DEP-APP-004) and submit it with your application as Attachment P.

For renewals of existing permits for activities located within the coastal boundary, you are not required to submit a *Coastal Consistency Review Form* with your initial application materials. However, DEP may notify you that submission of this form is required to process your application depending upon the specific activities to be conducted and their potential impact on coastal resources.

Activities outside the coastal boundary but within the coastal area:

For permit applications (new permits or renewals) for activities located outside of the coastal boundary, but within a town in the coastal area, you are not required to submit a *Coastal Consistency Review Form* with your initial application materials. However, DEP may notify you that submission of this form is required to process your application depending upon the specific activities to be conducted and their potential impact on coastal resources.

If you need copies of the *Coastal Consistency Review Form*, call the Permit Assistance Office 860-424-3003. For assistance in completing the form, or if you have questions on this process, call OLISP at 860-424-3034.

3. *Endangered And Threatened Species*

DEP strongly encourages all applicants to conduct a review of the following information as soon as possible and to resolve any outstanding issues, where feasible, before submitting their permit application to DEP to ensure a more timely and efficient review of their permit application.

CGS Section 26-310 provides that any activity authorized by a state agency, including any activity issued a permit by DEP, must not threaten the continued existence of any endangered or threatened species. If your activity is located in an area of concern, DEP's Connecticut Natural Diversity Data Base (CT NDDB) program will conduct a detailed review to determine if there will be any impact from your project and you will be notified of their results.

CT NDDB information includes all information regarding critical biological resources available to us at the time of the request. This information is not necessarily the result of comprehensive or site-specific filed investigations. Consultations with NDDB maps should not be substituted for site-specific surveys that may be required for environmental assessments. Note that current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated into the CT NDDB as it becomes available. Therefore, please be aware that additional information and/or surveys, other than those specified in this section, may be required.

How to Use the Maps

DEP has produced a set of maps entitled "State and Federal Listed Species and Natural Communities" (NDDB maps). These maps serve as a preliminary screening tool to assist in the evaluation of impacts to endangered and threatened species.

In order to determine whether your proposed activity may threaten the continued existence of an endangered or threatened species, you should review the NDDB maps. The maps are available in the DEP File Room at 79 Elm Street, Hartford, as well as with each town planner. NDDB printed maps and GIS data are also available for purchase from the DEP Store.

The maps are based on USGS quadrangle maps and cover the entire State of Connecticut. To use the maps, locate the project boundaries and any additional impacted areas on the appropriate map(s). If you are not sure on which quadrangle the project is located, use the quadrangle index map to identify the appropriate quadrangle(s).

No Conflict

If the project is **not**

- within a shaded area; or
- overlapping a water body that has any shading; or
- upstream or downstream (by less than ½ mile) from a shaded area,

then the project will not impact any known occurrence of listed species or significant natural community. When applying for your DEP permit, indicate on your permit application form that the maps were reviewed and list the date of the map (located in the map legend). You do not need to complete and submit the *CT NDDB Review Request Form* (DEP-APP-007).

Potential Conflict

If any part of the project **is**

- within a shaded area; or
- overlapping a water body that has any shading; or
- upstream or downstream (by less than ½ mile) from a shaded area,

then the project may have a conflict with a species or natural community.

In the case of a potential conflict, a completed *CT NDDB Review Request Form* (DEP-APP-007) with a project description and a copy of a map (a 1:24,000 USGS quadrangle map) clearly showing the project boundaries must be submitted to the CT NDDB program

at the address specified on the form.

When submitting your permit application, please include, if applicable, in Attachment K (Environmental Report) or, if an environmental report is not required, in Attachment Q, a copy of the completed *CT NDDB Request Form* along with any other correspondence provided to or received from the CT NDDB program, including copies of any field surveys.

NDDB staff will perform a more detailed review of projects identified as having potential conflicts. (Note: NDDB review generally takes four to six weeks.) Depending on the nature and scope of the proposed project, you may be required to obtain additional on-site surveys.

NDDB will return a “no conflict” response if listed species or significant natural communities will not be impacted based on the scope of the project activities and project location. This “no conflict” response can be submitted with the permit application form or forwarded to the DEP permit analyst working on your project.

If the project potentially impacts listed species or significant natural communities, appropriate DEP staff will provide recommendations to you and staff reviewing your project to avoid endangered and threatened species or recommendations to minimize impacts to species of special concern and significant natural communities. The comments will vary depending on the scope of the proposed project or activity and the extent of the information available on the species or community to be impacted. DEP staff reviewing permit applications will take these recommendations and comments into account while conducting their review and may incorporate appropriate conditions into their permit decisions.

If you have any questions on this process prior to submitting your application, call the Permit Assistance Office 860-424-3003.

4. *Aquifer Protection Areas*

Aquifer protection areas are defined in CGS Section 22a-354h and are the areas that contribute water to public water supply wells. Eighty-three towns within the state are required to establish Aquifer Protection Areas. Level B maps provide an approximation of the Aquifer Protection Areas. Please check the following list of towns to determine if your site location is within one of these towns and, if yes, check the appropriate map to see if the site is within an initial setback area or recharge area identified in a Level A or Level B map. Maps may be reviewed by contacting the Planning and Standards Division of the Bureau of Water Management 860-424-3020.

Avon	Guilford	Ridgefield
Beacon Falls	Hamden	Rocky Hill
Berlin	Killingly	Salisbury
Bethany	Killingworth	Seymour
Bethel	Ledyard	Shelton
Bethlehem	Litchfield	Simsbury
Bolton	Madison	Somers
Bristol	Manchester	Southbury
Brooklyn	Mansfield	Southington
Burlington	Meriden	South Windsor
Canton	Middletown	Stafford
Cheshire	Montville	Stamford
Clinton	Naugatuck	Stonington
Colchester	New Canaan	Thomaston
Coventry	New Hartford	Thompson
Cromwell	New Milford	Tolland
Danbury	Newtown	Torrington
Darien	North Canaan	Vernon
Derby	North Haven	Wallingford
East Lyme	Norwalk	Watertown
East Windsor	Old Saybrook	Westbrook
Enfield	Oxford	Weston
Essex	Plainfield	Westport
Farmington	Plainville	Willington
Glastonbury	Plymouth	Windsor
Goshen	Portland	Windsor Locks
Granby	Prospect	Woodbury
Griswold	Putnam	

5. *Other Permits* - List all local, state and federal permits or certificates that have already been issued for construction activity at the property on which the activity is proposed. Include municipal permits for subdivision of land and any zoning approvals.

Part V: Supporting Documents

All permit applications must include Attachments A through Q, unless otherwise noted in these instructions. Check the appropriate box by each attachment being submitted as verification that all required attachments have been submitted. Please label all attachments as referenced in the permit application form and in these instructions, being sure to include the name of the applicant as indicated on the *Permit Application Transmittal Form*.

Consult DEP staff - Regulated activities vary widely in their effect on the environment. The type and nature of the technical documentation required for a sufficient application will vary depending on the nature of the environmental effects and the relative significance of the impacts of the proposed activity. For this reason, *DEP strongly recommends that applicants consult with IWRD staff prior to conducting environmental and engineering studies*. Depending on the nature of a proposed activity, DEP may require information that is not specifically described in these instructions or may require clarification or additional explanation of information that is submitted. In most cases, applicants will require the assistance of a professional engineer, soil scientist, hydrogeologist, or biologist to adequately prepare supporting documentation.

Alternatives - During project planning particular attention should be given to alternatives which may avoid regulated areas or activities altogether. Where regulated areas or activities cannot be avoided, the least environmentally damaging alternative should be proposed in the application. For additional discussion on alternatives, see instructions for Attachment M.

Professional Certification and Seals as required per CGS Section 20-306a - All surveys, plans and reports prepared for the purpose of documenting property or ownership boundaries of land must be prepared by a Connecticut-registered land surveyor and must bear his or her certification and seal. For projects where public welfare or the safeguarding of life, health or property is involved or where design criteria need to be incorporated, surveys, plans and reports must be prepared by an engineer, land surveyor or architect registered in Connecticut and bear his or her certification and seal.

IWRD has examples of technical reports and analyses from its permit files available for inspection.

Part VI: Application Certification

After the application has been completed it must be reviewed and signed by both the applicant and the individual(s) who actually prepared the application and any part thereof required by the application. This includes: consultants, professional engineers, surveyors, soil scientists, etc. By their signature, they certify that to the best of their knowledge and belief, the information contained in the application, including all attachments, is true, accurate and complete.

The certification of the application package must be signed as follows:

1. For an individual(s) or sole proprietorship, by the individual(s) or proprietor, respectively;
2. For a corporation, by a principal executive officer of at least the level of vice president;
3. For a limited liability company (LLC), a manager, if management of the LLC is vested in a manager(s) in accordance with the company's "Articles of Organization", or a member of the LLC if no authority is vested in a manager(s);
4. For a partnership, by all general partners;

5. For a municipal, state, or federal agency or department, by either a principal executive officer or a ranking elected official or by other representatives of such applicant as authorized by law.

An application will be considered insufficient unless all required signatures are provided.

Instructions for Attachments

See Table 1, at the end of these instructions for the list of attachments required for each permit application.

Attachment A: Executive Summary

Submit as Attachment A, an executive summary which includes:

1. a brief description of the proposed activity;
2. a synopsis of the documentation included in the application including the environmental and engineering analyses conducted and the results of such analyses;
3. in the case of a permit renewal application, a description of any change, if any, in proposed regulated activities;
4. the anticipated time frame for initiation and completion of the proposed activities; and
5. any other information the applicant deems relevant to an understanding of the proposed activity.

Attachment B: United States Geological Survey (USGS) Topographic Quadrangle Map

Submit as Attachment B, an 8-1/2" x 11" copy or original of a USGS topographic quadrangle map, at a scale of 1:24,000 indicating the exact location of the project site and the proposed activities. DEP will use this map to enter your project location into its Geographic Information System (GIS). It is important that you accurately locate the project site and proposed activities, because the GIS generates

natural resource information relevant to your site. An inaccurate description of the project location will delay processing of your application.

The quadrangle name should be noted on the copy of the map submitted. The location of the project site and regulated activities should be indicated on the quadrangle map as follows: outline the parcel(s) of land upon which the proposed project will be located and pinpoint or circle the precise areas where activities are proposed. Where there are multiple areas of proposed activities, each area should be pinpointed or circled and numbered for reference purposes. If the size of the parcel is so small that outlining its boundaries and pinpointing regulated activities on the quadrangle map is impractical, simply pinpoint the approximate center of the parcel. In the case of a well or well field, the location of the proposed wells, in addition to any existing wells, should be identified. In the case of highway transportation projects, the taking line need not be depicted on this map; rather, only the areas within which activities are proposed should be circled. See Figure A, at the end of these instructions for examples of how a USGS map must be labeled when submitted.

Note: For the following Attachments C through F Documentation Form(s), complete the applicable documentation form(s) corresponding to the permit(s) sought.

Attachment C: Documentation Form for Inland Wetlands and Watercourses Permit, SCEL Permit, and 401 Water Quality Certification (DEP-IWRD-APP-101)

Complete only one copy of Attachment C, even if you are applying for more than one of the above listed permits.

1. *Name of Applicant* - Fill in the name exactly as it appears on the *Permit Application Transmittal Form*.
2. Check the permits being requested in this application. You may apply for more than one permit on one form.

3. If applying for a SCEL permit, indicate the SCEL map number(s) wherein the proposed activity will take place, identify the property by how the property is referenced on the map, i.e., by owner's name, parcel number, located between two specific pins, etc. and include the date of the map(s) referenced. See "Available Resources" section at the end of these instructions for assistance in obtaining SCEL maps.
4. *Name of wetland(s) and watercourse(s)* - Indicate the name of the wetlands and watercourses involved with or potentially affected by the proposed project. Many wetlands and most watercourses are named on USGS topographic quadrangle maps. SCEL watercourses are named on the encroachment line maps. Please use the "official" names for wetlands and watercourses as given on the USGS maps or, in the case of a SCEL application, the SCEL map. If the wetland or watercourse is known locally by some other name, provide that name as well. For example, if Round Lake is used on the USGS map for a waterbody ("also known as") a.k.a. Smith's Pond, write the name as follows: Round Lake a.k.a. Smith's Pond. In cases where the wetland or watercourse or waterbody is not named on the USGS map, indicate the name of the watercourse immediately downstream and indicate that the wetland or watercourse involved in the application is a tributary to that watercourse. For example, in the case of wetlands, "unnamed wetlands tributary to Smith's Pond;" and, in the case of an unnamed watercourse, "unnamed tributary to Smith's Pond". See "Available Resources" section at the end of these instructions for assistance in obtaining USGS or SCEL maps.
5. Describe the purpose and need for the *proposed project* - This narrative should describe the basic objective(s) of the applicant in pursuing the project and any public benefits to be derived therefrom.
6. *Description of the Regulated Activity*
 - a. Provide the extent of disturbance, in acres and in cubic yards.
 - b. Describe all proposed activities in and affecting wetlands, watercourses and floodplains. At a minimum, include in this narrative a description of any land clearing, grubbing, excavation, deposition or removal of materials and any interruptions or alterations of water flows. Quantify the proposed activity in terms of acres of wetlands and watercourses or upland altered and cubic yards of material placed or excavated. In situations where loss of flood storage is a significant concern, proposed fill or other obstructions to flood flows should be balanced by excavation. Describe any floodproofing or other flood mitigation measures proposed, any proposed mitigation for unavoidable adverse impacts and any temporary and permanent obstruction, constriction, alteration or pollution of wetlands, watercourses, or floodplains that will result, directly or indirectly, from the proposed project, on or off-site. Include all stormwater management systems and discharges of stormwaters that would result from construction or operation of the proposed project. Reference specific plans, drawings, or portions of the reports in your application which fully described the elements of the regulated activity.
7. *Description of Site* - Describe all natural and manmade features of the property at which the regulated activity is proposed, including at a minimum, wetlands, watercourses, floodplains, and existing development. Also describe any development planned by others that is related to the applicant's proposed activities.
8. *Disposal of excess material* - If the project will generate demolition debris or excess excavated material, a disposal plan is required. The disposal plan should include a location map

of the disposal site and describe the expected quantity and nature of such materials or debris. This plan should also describe whether any municipal, state, or federal permits are required for such disposal. If excess material from the project will be disposed of away from the subject property and such off-site disposed area is not identified in this application, DEP may deem the application insufficient or, as a condition of permit approval, require the permittee to submit a disposal plan to DEP prior to the commencement of regulated activities. The disposal plan, if applicable, should be included as Attachment C8.

9. *Inland Wetlands and Watercourses Applications only*

- a. *Public Water Supply Watershed Lands:* Water company watershed lands are shown on maps on file with the town or city clerk in the town where the subject property is located. In accordance with CGS Section 22a-42f, if the project is located in a public water supply watershed, the applicant must notify the water company of the application, within seven (7) days of submitting the application to DEP, by a letter sent certified mail, return receipt requested. This letter should describe the project and proposed activities and include a copy of the notice of permit application prepared in accordance with these instructions (see *Notice of Permit Application* section). Include a copy of the letter to the water company as Attachment C9a.
- b. *Adjacent Municipalities:* If any portion of wetlands or watercourses involved in the application is located within 500 feet of another municipality, the applicant must give written notice of the submission of the application to the inland wetlands agency of such other municipality. In accordance with CGS Section 22a-42c, the applicant must notify such other municipality by letter sent certified mail, return receipt requested on

the same day this application is filed with DEP. This letter should describe the project and proposed activities and include a copy of the notice of application prepared in accordance with these instructions (*Notice of Permit Application*). Include a copy of the letter to the municipality as Attachment C9b.

- c. *Owner's Consent:* If the applicant is not the owner of the property, the owner must give written consent to the proposed activity set forth in the application. Such consent is not necessary where a state agency is exercising its power of eminent domain over such property. Include a copy of the owner's consent as Attachment C9c.

10. *Adjacent Property Owners (not required for 401 Water Quality Certification)* - List the names and addresses of the current owners of record for land abutting the site of the proposed regulated activity. DEP will notify the owners of adjacent land of DEP's tentative determination to grant or deny a permit application. It is the applicant's responsibility to review municipal land records and to provide correct mailing addresses for all such owners. Failure to provide correct mailing addresses may delay processing of the application.

11. *Applications for 401 Water Quality Certification only*

- a. In order to obtain a Section 401 Water Quality Certification from the DEP, you must have applied for a federal license or permit for an activity which may result in a discharge into the waters of the United States, including wetlands. Please include, as Attachment C11a, a complete copy of the application form and plans submitted to a federal agency for such federal license or permit.

- b. Also indicate the permit name and application or file number. You may obtain such information by calling the *U.S. Army Corps of Engineers* at 1-800-343-4789.

- 12. *Summary of documents submitted with Attachment C* - Check the applicable box by each document being submitted under Attachment C as verification that all applicable documents have been submitted.

Attachment D: Documentation Form for Water Diversion Permit (DEP-IWRD-APP-102)

- 1. *Name of Applicant* - Fill in the name exactly as it appears on the *Permit Application Transmittal Form*.

- 2. *Name of waters affected by diversion*

Indicate the name of the wetlands, watercourses and aquifer, as applicable, involved with or potentially affected by the proposed project. Many wetlands and most watercourses are named on USGS topographic quadrangle maps. Please use the “official” names for wetlands and watercourses as given on the USGS maps. If the wetland, watercourse or aquifer is known locally by some other name, provide that name as well. For example, if Round Lake is used on the USGS map for a waterbody (“also known as”) a.k.a. Smith’s Pond, write the name as follows: Round Lake a.k.a. Smith’s Pond. In cases where the wetland or watercourse is not named on the USGS map, indicate the name of the watercourse immediately downstream and indicate that the wetland or watercourse involved in the application is a tributary to that watercourse. For example, in the case of wetlands: “unnamed wetlands tributary to Smith’s Pond;” and in the case of an unnamed watercourse: “unnamed tributary to Smith’s Pond”. In the case of an unnamed aquifer, simply write “groundwater”.

- 3. *Location of discharge*

If water will be discharged to a watercourse , sewage treatment plant or groundwater, in connection with the proposed diversion, indicate the official name of the watercourse or sewage treatment plant or indicate the location of groundwater. Official names of watercourses are found on the USGS topographic maps. If there is another name by which the watercourse is known, list that name also as a.k.a. (“also known as”).

- 4. *Drainage Basins*

- a. Indicate the drainage basin number(s) for the basin(s) wherein the proposed diversion will take place. Drainage basin numbers are delineated on a map compiled by the Connecticut Geological Natural History Survey and entitled “Natural Drainage Basins of Connecticut, 1981”, as amended. See “Available Resources” section at the end of these instructions for assistance in obtaining this map.
- b. *Interbasin Transfer of Water* Indicate by checking “Yes” or “No” whether the proposed diversion of water involves the transfer of water from one subregional drainage basin to another. If yes, indicate the donor basin number and the basin number(s) where the water will be used or discharged. Also, if yes, an environmental impact report (EIR) in accordance with CGS Section 22a-369(10) may be required. Please call IWRD at 860-424-3019 to verify whether this requirement applies. If so, submit such an environmental report with this application as Attachment D4. The EIR should focus on and document the effect of the transfer on present and future water uses in the donor basin, taking in account the effects of the other diversions which the applicant reasonably expects to commence or maintain in the future. The EIR should include a plan for meeting water supply

needs and demands in the donor basin for at least twenty-five years. The EIR must also evaluate alternative solutions to water supply or wastewater conflicts identified therein and should include: (1) a comparative cost analysis of alternative measures to resolve such conflict(s) and (2) a description of the environmental effects of each such alternative.

The EIR should include an evaluation of the alternatives to the proposed diversion, including water conservation measures, the financial costs and environmental impacts of each such alternative considered by the applicant, and a detailed explanation of why each such alternative was rejected by the applicant.

In addition to the above information, the EIR should identify existing water uses, existing and potential conflicts in water use, and existing and projected water supply needs and demands in the affected donor basins(s), and should evaluate the social and economic effects of the proposed diversion on the affected donor basin(s), including the capacity of remaining water resources to support existing and projected growth and development for at least 25 years. This evaluation should address the effects of the proposed diversion on water supply needs and demands, wastewater treatment, waste assimilation, power generation, flood management, navigation, water quality, recreation, wetlands habitat, agriculture, fish and wildlife, and maintenance of adequate flows for the above referenced needs and resources.

The scope of the EIR is determined by the limits of the “donor basin,” or the contributing “drainage basin,” involved in the interbasin transfer of water. DEP’s regulations define these terms to mean “... that area [of the donor basin] which will or

is reasonably likely to be affected by the proposed diversion.”

5. *Description of Site* - Describe all natural and manmade features of the property at which the regulated activity is proposed, including, at a minimum, wetlands, watercourses, floodplains, and existing development. Also describe any development planned by others that is related to the applicant’s proposed activities.
6. *Description of Diversion* - Describe the proposed diversion including its location, purpose and its general method of operation. Include all design elements pertinent to the diversion which are related to diverting, withdrawing, distributing and discharging water and which are intended to mitigate any unavoidable adverse impacts. Also include a description of any excavation, deposition, and removal of any materials, any balancing of fill or other obstructions to flood flows with excavation, and any temporary and permanent obstruction, constriction, alteration or pollution of wetlands and watercourses that will result, directly or indirectly, from the proposed project and activities, on or off-site. Reference specific plans, drawings, and portions of reports in your application which fully described the elements of the regulated activity.
7. *Withdrawal and Use of Water*
 - a. If the proposed diversion would cause or result in the withdrawal of water, provide the information outlined on the application form.
 - mg = million gallons
 - mgd = million gallons per day
 - cfs = cubic feet per second
 - gpm = gallons per minute
 - b. Describe how often the diversion will be used in terms of specific days and/or weeks of specific months of the year. If the diversion is seasonal or is otherwise restricted to certain times of the year, or is

for back-up or emergency use, describe the frequency of such diversion and the conditions for such use.

- c. If the application is to renew or modify a permit, any proposed changes in the diversion such as an increase in the rate, quantity or frequency of diversion, change in location or design of withdrawal structures, or change in supply sources, are considered *new diversions* and may not be initiated until the required renewal or modification of the permit is obtained.
- d. Describe how withdrawals and use of water will be metered, measured, or controlled, including details on the equipment to be utilized, the specific flow measurements to be taken and the criteria to be utilized for such measurements if a meter is not used.

- 8. *Need for Diversion* - Describe the basic objective(s) of the proposed diversion and any public benefits to be derived therefrom. Include in Attachment M (Alternatives Assessment) any information supporting why the diversion is needed.
- 9. *Instream Flow Maintenance* - If the proposed diversion may interrupt or significantly diminish stream flows, describe any proposed design and operational measures to provide an instantaneous flow or release of water in the natural watercourse downstream of the diversion.

10. *Long-range Water Conservation Plan*

A long range plan for conserving water and for limiting water use during seasonal or unexpected water shortages must be submitted as Attachment D10 for all applications for the withdrawal of water. This “long range water conservation plan” (LRWCP) should:

- a. fully describe the policies and goals of the applicant’s long-range water conservation

efforts; the actions taken or to be taken in furtherance of such policies and goals; an implementation schedule for such actions; and a detailed program for measuring, in terms of quantities of water saved or to be saved, the effectiveness of the water conservation efforts;

- b. fully describe the volume of lost or unaccounted for water, based on the average of available data from the five years immediately preceding submission of the application or, if such data are unavailable, on the most current of existing data; and
- c. fully describe the applicant’s leak detection and repair program and, in the case of an application to divert water for public water supply, leak detection services offered to consumers.

DEP may, after initial review of the application, require an applicant to submit a plan to reduce lost or unaccounted for water to an acceptable level. If required, such plan shall include, in addition to any other information requested, a schedule to implement such remedial actions and a detailed program for measuring the effectiveness of such actions.

11. *Holders of Flowage Easements/Rights*

List the names and addresses of the known current holder of flowage easements or other flowage rights known to the applicant, potentially affected by the proposed regulated activity. DEP will notify such holder of DEP’s tentative determination to grant or deny a permit application. It is the applicant’s responsibility to review municipal land records and provide correct mailing addresses for all such holders. Failure to provide correct mailing addresses may delay processing of the application.

- 12. *Hydrogeologic Report* - If your proposed regulated activity includes pumping water from wells or a surface waterbody within stratified

drift, a hydrogeologic report must be submitted as Attachment D12. The hydrogeologic report should include hydrogeologic investigations of the effects on ground water and surface water due to pumping water from wells and waterbodies. In the case of a diversion permit application to construct and operate one or more wells, this report provides the foundation for an assessment of impacts in the Environmental Report (Attachment K). The investigations and analyses must completely describe the effects of the withdrawal on ground water and surface water including public and private water supply wells, ground water quality, stream flows, and wetlands. (Where ground water contamination is present, contaminant transport modeling may be required.) The hydrogeologic investigation should be supported by a ground water model which delineates the area of influence of the maximum proposed withdrawal under seasonal low flow and drought conditions. Piezometric surface contours within the area of influence are required for an analysis of the effects of drawdown on water resources within the area of influence of the well(s).

The methodology established in DEP's Level A Mapping Regulations (RCSA Section 22a-354b-1) for numerical ground water modeling provides the most accurate delineation of an area of influence for a well screened in stratified drift. With respect to wells to be drilled in bedrock, DEP recognizes that modeling may not be very useful or practical, therefore a plan for pump testing and monitoring ground and surface water in the vicinity of the well(s) should be proposed in lieu of an aquifer test. The hydrogeologic report should develop a conceptual model of the aquifer in which a proposed well is to be located and should justify the selection of the ground water model used. The identification of both ground water flow boundaries and resources present in the area is a key consideration in the choice of an appropriate ground water model. The location

of these boundaries and resources should be used to determine the selection of monitoring locations for data collection and/or aquifer testing. (See data collection section of the Level A Mapping Regulations.)

The ground water model should be fully documented. Documentation should include, but not be limited to, input data and aquifer parameters (including analyses used to derive the parameters), the model grid and its dimensions, demonstrations of model calibration and verification, initial conditions, sensitivity analyses and predictive runs.

An average water table condition obtained from the calibrated, verified model should be used as the starting point for the predictive simulation.

In lieu of an aquifer test to determine induced infiltration from a nearby stream or other surface water, impacts to stream flow may be analyzed by subtracting 100% of the proposed maximum withdrawal from the 99.2% durational flow (7Q10) in the stream. Durational flows for ungaged streams may be calculated using the procedure given in DEP and USGS publications such as "Streamflow Information for Connecticut with Applications to Land-use Planning," *Connecticut Water Resources Bulletin #35* (Cervione, 1982).

A rating curve for an ungaged stream should be constructed to document pre-diversion conditions and to link durational flows with flows observed during data collection. In general, data collected at lower flows will be of particular interest for documenting environmental impacts (see instructions for Attachment K, Environmental Report).

Data concerning durational flows are available for many streams on which USGS gaging stations are located. These data have been published by the USGS and DEP; updated durational flow data may be obtained through

the USGS office, located at 101 Pitkin Street in East Hartford, CT (860-291-6740).

Where necessary, stream gaging should be performed using the methodology given in RCSA Section 22a-354b-1(d)(3) (Level A Mapping regulations). A recommended technical reference for methodology of stream flow measurement is: Buchanan, T. and W. Somers, 1969. "Discharge measurements at gaging stations", *USGS Techniques of Water Resource Investigations*, Book 3, Chapter A8.

13. *Summary of documents submitted with Attachment D* - Check the applicable box by each document being submitted under Attachment D as verification that all applicable documents have been submitted.

Note: Pre-application meetings between the applicant's consultant and DEP staff to discuss technical issues in the planning stages of application preparation are strongly recommended.

Attachment E: Documentation Form for a Dam Construction Permit (DEP-IWRD-APP-103)

1. *Name of Applicant* - Fill in the name exactly as it appears on the *Permit Application Transmittal Form*.
2. *Name of Watercourse* - Indicate the name of the watercourse affected by the dam, the name of the dam, and the name of the impoundment. Please use the "official" names for watercourses as given on the USGS maps. In the case of existing dams registered with the DEP, use the name and dam inventory number assigned to the dam by DEP in the registration documents. If the dam or impoundment is known locally by some other name, provide that name as well. For example if Round Lake is used on the USGS map for a waterbody locally also known

as (a.k.a.) Smith's Pond, write the name as follows: Round Lake a.k.a. Smith's Pond.

3. Check appropriate box(es) describing the proposed activity.
4. Identify all anticipated uses, by the applicant or others, of any existing or proposed impoundment.
5. *Impoundment Characteristics* - For any existing or proposed impoundment identify the following:
 - a. *Surface Area*: the area of the impoundment, in acres, at its normal water surface elevation.
 - b. *Drainage Area*: the watershed area, in acres or square miles, that contributes to the flow through or over a water control structure or contributes to the flow of a stream at the location of the existing or proposed dam.
 - c. *Volume at Spillway Height*: the quantity of water, expressed in acre-feet or cubic feet, that any proposed or existing dam impounds at the proposed or existing elevation of the principal spillway.
 - d. *Volume at Top of Dam*: the quantity of water, expressed in acre-feet or cubic feet, the dam impounds at the proposed or existing top of dam elevation.
6. *Dam Characteristics* - For any existing or proposed dam identify the following:
 - a. *Maximum Height*: the greatest vertical distance from the toe of any proposed or existing dam to the expected or actual elevation of the top of dam (not to spillway crest).
 - b. *Total Length*: the distance in feet along the center line of any proposed or existing

dam, measured from the right abutment contact to the left abutment contact.

7. *Spillway Characteristics* - For any existing or proposed spillway identify the following:

- a. *Type*: describe the type of spillway as: weir (broad crested, ogee, etc.), weirboard, drop inlet, concrete, corrugated metal pipe (CMP), etc.
- b. *Capacity*: the maximum amount of flow, expressed in cubic feet per second, which the spillway is capable of conveying with the water surface elevation 1) at the design storm elevation and 2) at the top of the dam.
- c. *Length*: the measurement of the total weir length; specify pipe diameter if a drop inlet is specified in response to question 7a.
- d. *Height above Stream Bed*: the vertical distance from the toe of the spillway to the spillway crest.
- e. *Amount of Freeboard*: the distance in feet from the spillway crest to the lowest point on the crest of the dam.
- f. *Existing Water Surface Elevation*: the elevation (in feet National Geodetic Vertical Datum (NGVD)) at which the impoundment is currently maintained.
- g. *Historic Water Surface Elevation*: the normal elevation (in feet NGVD) at which any existing impoundment had been maintained in the past and the year such elevation was last maintained. Provide documentation supporting historic data as Attachment E7g.
- h. *Proposed Water Surface Elevation*: the elevation (in feet NGVD) at which the impoundment will be maintained after any proposed modifications.

8. *Type of Construction* - Give a brief description of the type of material comprising each component of any proposed or existing dam, dike or spillway and of any proposed modification or repairs to any dam, dike or spillway.

9. *Hydraulic Factors*

- a. *Spillway Design Storm Frequency*: The “spillway design storm” is used to determine the appropriate spillway size and capacity based on the dam’s size, classification, and its hazard potential. The size classification of dams range from small to large based on their height and storage capacity. The hazard potential is the extent to which loss of life and economic damage can be expected in the event of a dam’s failure. The minimum spillway design storm which DEP accepts is the 100-year return frequency storm with one foot of freeboard. Design storms may range from the 100-year return frequency storm to the Probable Maximum Flood event. In selecting a spillway design storm, you should consider, among other things, the downstream hazard, and the volume of water which would be discharged following such storm.
- b. *Design Storm Duration*: the actual length in hours of the design storm. Typically, the duration of a design storm ranges from one hour to seventy-two hours. For drainage areas of less than one square mile, only the 1, 6, and 24 hour duration storms need to be analyzed.
- c. *Peak Inflow*: the maximum flow resulting from the design storm, expressed in cubic feet per second, that is conveyed into the impoundment.
- d. *Peak Outflow*: the maximum flow, expressed in cubic feet per second, that is conveyed through the water control structure(s) during the design storm.

e. *Pond Elevation at Peak Outflow*: the maximum water surface elevation reached in the impoundment during conveyance of the design storm.

10. *Use of Fill Material* - If fill material will be placed in a wetland or watercourse, quantify the amount of such fill in cubic yards and the area of such fill in acres or square feet. If fill is to be placed, it must be shown on plans submitted as Attachment G.

11. *Rate of Flow* - Identify the minimum instantaneous flow that will be maintained downstream of the dam when the impoundment is being filled or refilled.

12. *Location of Potable Water Supply Wells* - If the production capacity of wells on properties surrounding the impoundment will be adversely affected by drawing down the impoundment, a plan to provide potable water will be required as Attachment E12.

13. *Dam Operations & Maintenance Manuals and Flood Emergency Operations Plans*

Part 1: Operations & Maintenance Manual for Dams, Dikes, and Similar Structures

Submit as Attachment E13, Part 1 an operations and maintenance manual (O & M manual) consisting of a written description of the procedures to be implemented by the applicant/dam owner in the operation of an existing or proposed dam, dike, or similar structure. This manual must also include schedules for routine maintenance and periodic owner inspections to insure the dam is properly functioning. Where applicable, a sediment monitoring and/or removal program should be included in the plan to assure adequate storage capacity of stormwater detention and/or sedimentation basins. Sample O & M manuals and DEP Bulletin No.36 "Guidelines for Inspection and Maintenance of Dams" are available for review in the IWRD office.

Part 2: Emergency Operations Plan for Dams, Dikes, and Similar Structures

Submit as Attachment E13, Part 2 an emergency operation plan (EOP) consisting of a written description of the procedures to be implemented by the applicant/dam owner during emergency conditions at an existing or proposed dam, dike, or similar structure. This plan must describe in detail procedures to: (1) monitor the structure during periods of extreme precipitation and runoff; (2) identify potentially affected properties located downstream as identified by a dam breach analysis; (3) notify appropriate local emergency response officials of potential problems at the dam and provide such officials with adequate information to enable them to notify or evacuate affected residents. DEP has developed EOP guidelines to assist in EOP preparation, which are available from IWRD's Dam Safety Section. If an applicant does not submit an EOP, explain why one is not necessary.

14. *Summary of documents submitted with Attachment E* - Check the applicable box by each document being submitted under Attachment E as verification that all applicable documents have been submitted.

Attachment F: Documentation Form for Flood Management Certification (DEP-IWRD-APP-104) (for state agencies only)

Connecticut's Flood Management Statutes require all state agencies proposing any activity within or affecting a floodplain, or that impacts natural or man-made storm drainage facilities, to certify that such activity conforms with the state's flood management standards. State activities which must be certified include:

- any proposed structure, obstruction, encroachment or work in a floodplain or coastal high hazard area;
- any proposed construction or other development which affects drainage and stormwater runoff;

- any grant or loan administered by the state for a proposal that involves land use or land use planning within or affecting a floodplain; and
- the disposal of state lands or buildings located within a floodplain.

The Flood Management Statutes require state agencies to plan and carry out their activities so as to: avoid flooding and flood hazards, comply with the requirements of the National Flood Insurance Program and technical requirements of municipal floodplain regulations, consider flood-proofing and other practical alternatives to constructing flood and erosion control structures, promote long-term nonintensive uses of the floodplain, and locate utilities so as to discourage floodplain development. See "Available Resources" section at the end of these instructions for assistance in obtaining National Flood Insurance Program (NFIP) information.

The flood management certification requirements of CGS Section 25-68d do not apply to any proposal by the Department of Transportation for a project within a drainage basin of less than one square mile.

1. *Name of applicant* - Fill in the name exactly as it appears on the *Permit Application Transmittal Form*. The applicant must be a state agency.
2. Insert the name of the facility, project and project number used in Part IV: Site Information of the main application form (DEP-IWRD-APP-100).
3. *Name of floodplain and watercourse* - A floodplain is named after its river. Indicate the name of the watercourse and floodplain potentially affected by the proposed project. Most watercourses are named on USGS topographic quadrangle maps. Please use the "official" names for watercourses as given on the USGS maps. If the watercourse is known locally by some other name, provide that name

as well. For example, if Mill Stream is used on the USGS map for a waterbody locally also known as (a.k.a.) Black Shop Brook, write the name as follows: Mill Stream a.k.a. Black Shop Brook. In cases where the watercourse is not named on the USGS map, indicate the name of the watercourse immediately downstream of the project site and indicate that the project site is tributary to that watercourse.

4. The Documentation Form for Flood Management Certification (DEP-IWRD-APP-104) must be signed by the head of the state agency (or his designated agent) sponsoring the activity.

Attachment G: Plan Sheets and Drawings

Submit as Attachment G, plans and drawings showing existing and proposed conditions at the subject property and any other regulated areas. All such plans and drawings should be clearly labeled and be sufficiently detailed to fully describe what is being proposed, where, and by whom. Note: detailed final structural design plans are required for dams, dikes, flood control structures, retaining walls, and structurally floodproofed structures. Clear, well-drawn plans are an important tool to help DEP staff understand the potential effects of the proposed activity and to assess the adequacy of its design.

Plans and drawings should be of an appropriate scale and show the following:

1. all plan sheets and drawings should contain a map key and a title block showing at least its title, number, original date and revision dates, the name of the applicant, the name of the individual and the firm that prepared the plan, plan scale and bear all appropriate professional certifications and seals. The first sheet of a set of plans or drawings should contain a location key (e.g., USGS topographic map).

2. the boundaries of the subject property, the location of properties abutting the subject property, and the names of the owners of record of such abutting properties;
3. existing and proposed topography and all proposed excavation, filling, and structures (Contour intervals should be no greater than two (2) feet; cross sections may also be useful to clarify grade changes.);
4. the location at the subject property of the top of the affected watercourse or river bank and the location of the existing and proposed ordinary high water line (for tidal waters, the local high tide line);
5. a North arrow, the direction of water flow, and the topographic datum;
6. the location of the floodplain and floodway and the elevation contour of the base flood based on information provided by the National Flood Insurance Program (NFIP); NFIP information may be obtained through the municipal engineering or the Town Clerk's offices, or from the Flood Management Section of DEP's IWRD 860-424-3706;

Please note: if the application is for a SCEL permit, in addition to the above NFIP information, show the location of the state encroachment line and the contour of the SCEL base flood at the subject property.

7. the location of wetlands, watercourses and other waterbodies potentially affected by the proposed activity and the description of the type of any wetlands and wetland soils at the subject property and reference to the soil scientist's or biologist's report (title, author and date) wherein the delineation of such wetlands is described;

Wetlands and watercourses should be delineated in accordance with CGS Section 22a-38 (Inland Wetlands and Watercourses Act), except in the case of an application for water quality certification under Section 401 of the Federal Clean Water Act. In such case, wetland delineations should be accomplished using the current federal delineation method - *Corps of Engineers Wetlands Delineation Manual*, Environmental Laboratory, Department of the Army Waterway Experiment Station, Vicksburg, Mississippi, 1987. Technical Report Y-87-1;

8. in the case of a permit application involving any regrading, excavation, filling, dewatering or other land or water disturbance activity that could result in the detachment of soil or rock fragments by water, wind or ice, an erosion and sediment control plan prepared in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, DEP Bulletin 34 (the "Guidelines"). See requirements described under Attachment H: *Soil Erosion and Sediment Control Plan*.
9. details of any proposed measures (best management practices) for minimizing adverse impacts during construction;
10. if the subject property is subject to flooding, the details of warning notices or signs to that effect, including the location and language of such notices or signs. Such notices or signs shall be large enough to be read by persons using the subject property and should contain the following words: "flood hazard area...this area subject to flooding..." and depict the actual level flood waters would reach during a flood of the magnitude of the base flood at the location of such notice or sign.

Attachment H: Engineering Documentation

Part 1: Engineering Report Checklist (DEP-IWRD-APP-105A) and the Engineering Report

Submit as Attachment H, Part 1, the *Engineering Report Checklist* and the *Engineering Report* consisting of engineering studies, signed and sealed by a Professional Engineer licensed in the State of Connecticut, and other documentation as appropriate to fully and clearly describe the design of proposed facilities or other actions and the hydrologic and hydraulic effects thereof. The engineering documentation should include a narrative clearly describing the contents of the engineering report, including summary tables as applicable. The report must contain the technical documentation needed to complete the *Hydrologic and Hydraulic Consistency Worksheet* (Part 2 of Attachment H) and must answer at the minimum these fundamental questions:

- Are the hydraulic aspects of the project properly designed within accepted criteria provided for in the statutes, regulations, and engineering practice?
- Does the project impede or modify drainage patterns, flood flows, flood storage, or low flows in such a way as to cause adverse impacts to other properties or to the environment?
- Will the project be constructed in such a way as to protect other properties and the environment from adverse pollution impacts?

Stormwater Management

Hydrologic and hydraulic design calculations (pre- and post-development conditions) including, as applicable:

- Description of the design storm frequency, intensity, volume and duration. Frequency data must be obtained from the Connecticut

Department of Transportation Drainage Manual, as revised.

- Watershed map with locations of design points and watershed areas (acres) for runoff calculations, associated flow paths, and areas of potential flooding impact due to the proposed activity or project.
- Computations used to develop Times of Concentration (T_c).
- Imperviousness of the entire site and each watershed area as well as existing and proposed land use and runoff characteristics of the project site and runoff characteristics of the watershed in which such site is located (Identify methodology used to determine land use and runoff characteristics.).
- Natural Resources Conservation Service (NRCS) runoff curve numbers or volumetric runoff coefficients.
- Computations used to determine peak runoff rates, and velocities for each watershed area (24-hour storm):
Stream Channel Protection: 2-year frequency (“over-control” of 2-year storm);
Conveyance Protection: 10-year frequency;
Peak Runoff Attenuation: 2-year, 10-year, and 100-year frequency;
Emergency Outlet Sizing: safely pass the 100-year frequency or larger storm.
- Hydrograph routing calculations, including runoff volume, peak inflow, inflow hydrograph, reservoir routing computations and resulting outflow hydrograph computations for existing conditions, proposed conditions with no stormwater management, and proposed conditions with stormwater management, rating curves for outlet structures and spillway stage/discharge for existing and proposed conditions, stage/storage curve for

impoundments, summary table indicating peak inflow, peak outflow, maximum water surface elevation, and duration of flow for proposed and existing conditions.

- A description, schematics, and calculations for proposed drainage and stormwater management systems, bridges and culverts, including design details and calculations for any proposed pre-discharge treatment, sediment retention basins, particle or oil separators, and stormwater detention basins.
- Infiltration rates, where applicable.
- Documentation of sources for all computation methods and field test results.
- If computer-assisted analyses are performed, a CD of the input and output data and the associated program and a single hard copy of the data, including all input and output tables.
- In the case of a proposed detention basin, the analysis should include timing and duration of expected outflow, stream stability analysis, and hydrograph summation information for all downstream design points.

Flood Plain Assessment

If a watercourse or floodplain may be affected by the proposed activity, the Engineering Report should document and analyze the effect of the proposed project on flooding and flood hazards at the subject property, on upstream and downstream properties, and on properties on the opposite side of the watercourse. If you need information on the 100-year or SCEL base floods, contact the IWRD at 860-424-3019.

- Describe or simulate existing and proposed conditions upstream and downstream of the proposed activity. These conditions include effects of the proposed activity on flood heights and velocities, change in flood storage and flood hazards for the design flood, and impacts

from at least the 2-year, 10-year and 100-year flood events or, if the project involves a critical activity (see instructions for Part 2), the 500-year base flood. Field surveys should be used to determine the location and geometry of channel cross sections and flood limits used in the analysis.

- In the case of proposed activity riverward of SCEL, the analysis must also include a determination of the effect of the proposed activity on flooding and flood hazards together with an equivalent encroachment on the opposite bank for the flood event used in establishing the encroachment lines.
- For any bridge or culvert placement or replacement with a drainage area of 100 acres or more, plan sheets showing the existing and proposed inundation area for the 2, 10, 25, 50, and 100 year discharges, carried to convergence.
- A description and analysis of the floodplain modifications, at or off the subject property, that would be required to restore any flood conveyance and flood storage capacity that would be lost as a result of the proposed activity.
- Demonstration that any backwater resulting from the proposed activity will not affect the free discharge of flood waters from an existing dam, dike, or similar structure. If the spillway capacity for any such structure is inadequate, explain how the proposed activity has been designed to upgrade spillway capacity, such that the activity will not interfere with the spillway's ability to pass the 100-year flood, or such other flood volume necessary to protect life and property from hazards posed by the dam. For design purposes, the most severe flow conditions should be evaluated and the design storm should be evaluated for the 1 hour, 6 hour, and 24 hour rainfall durations.

- Backup data and the complete hydraulic analysis for proposed modifications to the floodplain, including a location plan and plot for all sections used in the analysis, a profile sheet showing all profiles analyzed, and a summary sheet of all engineering analyses.

The analysis of the hydraulic effect of the proposed activity should include, as appropriate, an investigation of:

1. Immediate downstream reach of the watercourse and the opposite bank, where applicable:
 - timing and duration of existing and expected outflow;
 - assessment of expected impacts on stream stability (from erosive action);
 - existing and expected flood height impact;
2. Downstream reaches for flood impact assessment:
 - timing and duration of existing and expected outflow of contributing drainage areas at downstream design points;
 - summation of respective hydrographs at each design point;
 - existing and expected flood height impact along downstream reaches;
 - assessment of expected impacts on stream stability (from erosive action).

Dams, Dikes, Diversion Channels and Similar Structures

Design Criteria: If the proposed activity involves the construction, repair, or modification of an existing dam, dike, diversion channel or similar structure or the new construction of such a structure, the application should contain, in addition to the hydrologic and hydraulic analyses described above, the design engineer's report, design

computations, and construction specifications that address the following:

1. *primary and emergency spillway and outlet structure erosion protection:*
 - erosion/scour prevention measures with design computations;
 - debris control structure sizing for inlets;
2. *dam breach analysis:*
 - the extent of the analysis should be commensurate with the dam's hazard potential and should consider dam failure under a worst case scenario;
3. *geotechnical evaluation:*
 - foundation conditions as established through borings or test pits;
 - assessment of foundation seepage potential;
4. *construction specifications:*
 - a. *foundation preparation:*
 - excavation to and adequate preparation of suitable foundation materials for embankment and structures must be provided for; (This is particularly important if borings or test pits have not been performed during design phase.)
 - the area on which an embankment is to be constructed must consist of material that has sufficient bearing strength to support the embankment without excessive consolidation.
 - b. *embankment material:*
 - soil gradation must be specified as well as the method of placement, including maximum lift dimensions and degree of compaction to be achieved.
 - describe the method of permanent embankment stabilization by

establishing a hardy vegetative cover or other acceptable alternative.

c. *outlet structure:*

- placement methods for outlet conduit(s) must be specified to assure adequate bedding preparation, seepage collar installation, and compaction effort to preclude settling and seepage.

d. *construction inspection:*

- a registered professional engineer shall inspect construction activities to approve the following:
 - ♦ foundation subgrade suitability and preparation;
 - ♦ embankment material gradation and suitability;
 - ♦ embankment material placement and compaction;
 - ♦ spillway and low level outlet materials and installation;
 - ♦ core material suitability, gradation and placement, if applicable;
 - ♦ erosion/wave protection material (riprap) installation.

Soil Erosion and Sediment Control Plan

In the case of a permit application involving any regrading, excavation, filling, dewatering or other land or water disturbance activity that could result in the detachment of soil or rock fragments by water, wind or ice, an erosion and sediment control plan prepared in accordance with the 2002 Connecticut Guidelines for Soil Erosion and Sediment Control, DEP Bulletin 34 (the “Guidelines”), that contains at a minimum:

1. the existing and proposed drainage and storm water management system for the subject property; (if no storm water management system is proposed, so indicate);
2. the erosion and sedimentation controls to be implemented during construction and the operation and maintenance procedures for such controls; (Particular attention should be given to the management of stormwater and control of turbidity during dewatering operations);

Please note: In the case of dam construction, repair or modification, provide detailed plans and specifications for controlling erosion of accumulated sediments during draw down and for controlling the erosion of exposed pond bottom sediments while the impoundment is drawn down.

3. a proposed construction sequence, including a narrative detailing related water handling and sedimentation and erosion controls and the operation and maintenance procedures for such controls;

Please note: In the case of dam construction, repair, or modification, include detailed plans and specifications for proposed water handling, including, dewatering methods, anticipated rates of dewatering and refilling, the drawn down elevation of the impoundment and the duration of such draw down. The water-handling plan must demonstrate that construction has been sequenced to minimize changes in water surface elevations in the impoundment and to minimize the length of time the impoundment is drawn down. It must also provide for a continuous instantaneous release downstream of the dam while the impoundment is being refilled.

4. locations for all staging, vehicle, material, and equipment storage or stockpile areas that the applicant expects to use during construction;
5. the location of existing or proposed construction access roadways or haul ways;
6. the location of borrow and disposal areas at the subject property;

7. construction ancillary to the proposed activity (e.g., channel improvements or pond dredging simultaneously undertaken with dam repair);
8. documentation and calculations provided by a professional engineer licensed to practice in the State of Connecticut for all proposed measures identified in the Guidelines as having “design criteria;”
9. a copy of the checklist found on pages 3-12 and 3-13 of the Guidelines with items included so indicated;

Part 2: Hydrologic and Hydraulic Consistency Worksheet (DEP-IWRD-APP-105B)

Submit as Attachment H, Part 2 the *Hydrologic and Hydraulic Consistency Worksheet*. The worksheet consists of a checklist and brief narratives describing how the applicant’s project is consistent with the standards established in CGS Section 25-68d and RCSA Section 25-68h-1 et seq. regarding floodplains, flooding, and the avoidance of flood hazards. Any application involving structures, obstructions, or encroachments or work in or affecting a floodplain or a coastal high hazard area or affecting stormwater drainage patterns and stormwater runoff must include the appropriate section(s) of the *Hydrologic and Hydraulic Consistency Worksheet*.

The worksheet is comprised of four sections listed below: Note that Sections III and IV of the worksheet *only apply to state grants and loans and disposal of State land or other property*.

The worksheet must be filled out based on the results of the engineering documentation prepared in accordance with Part 1 of Attachment H. Where additional space is required to respond fully on an issue, insert additional pages into the worksheet itself; do not separate your responses by attaching them to the end of the worksheet. Do not modify the format of the worksheet.

Section I: Floodplain Management

Section I applies to any structure, obstruction, encroachment, or other work proposed within a floodplain or coastal high hazard area, including new construction, substantial improvements to any existing structure, any filling, dumping, construction, reconstruction, excavation, land clearing, land grubbing, or drainage work, and any activity which would change the use or the topography of a floodplain.

Section II: Stormwater Management

Section II applies to any proposal for development, redevelopment, or improvement of property affecting stormwater drainage patterns and stormwater runoff.

Section III: State Grants and Loans (for state agencies only)

Section III applies to any grant or loan administered by the state, including administration or disbursement of federal grants or loans by a state agency to another state agency or to a municipal or regional agency, for proposals affecting the use or development of floodplains or coastal high hazard areas or affecting stormwater drainage patterns and stormwater runoff.

Section IV: Disposal of State Land (for state agencies only)

Section IV applies to any sale, trade or transfer of any state-owned lands or buildings located in a floodplain or in a coastal high hazard area.

For work involving complex or critical stormwater systems, DEP may require development of a basin stormwater management plan consistent with the requirements of RCSA Section 25-68h-3(g). Ordinarily in such cases, the intergovernmental review procedures for projects proposed by state agencies would identify the need for such plans early in the planning stage. If you have any questions on Flood Management Certification requirements call 860-424-3706 or, if a state wetlands permit is also required, 860-424-3019.

Attachment I: Flood Contingency Plan

Submit as Attachment I, a flood contingency plan consisting of a written description of the measures to be taken by the applicant during and after construction to protect life and property and to prevent pollution during significant rainfall events. A flood contingency plan consists of two parts:

1. ***Construction Flood Contingency Operation Plan*** - The purpose of this part of the plan is to ensure that, during construction, all structures, materials, and equipment will be anchored or restrained to prevent displacement or flotation, or will be removed from the floodplain prior to a flood. The storm events that will adversely affect construction activities should be identified.
2. ***Post Construction Flood Contingency Operation Plan*** - The purpose of this part of the plan is to protect people and property from flooding and flood hazards after construction has been completed and to prevent the pollution of waters of the state. If an applicant has prepared an Emergency Operations Plan (EOP), required under Attachment E: Documentation for Dam Construction Permit Applications, this part of the flood contingency plan is not required.

Flood contingency plans must identify contingency actions, procedures and specific time factors for informing persons at the project site at the onset of flooding, and for securing the site during floods. Include the name, address and telephone number of the person(s) responsible for implementing such plans.

Attachment J: Soil Scientist Report *(not required for Flood Management Certification)*

If wetlands or watercourses will be altered or otherwise affected, directly or indirectly, by the proposed activities, the wetlands must be delineated and their boundaries shown on application plans (Attachment G) and the applications must include a soil scientist report as Attachment J. The report

must describe, in detail, the soils on the subject property and be consistent with the standards set by the National Cooperative Soil Survey of the United States Department of Agriculture, Natural Resources Conservation Service (NRCS) formerly known as the Soil Conservation Service. This report must include a map showing the soils on the subject property, a summary of the investigation performed, and the results of such investigation. The primary focus of the soils report is to identify soil-based constraints on development and to delineate the limits of wetlands and watercourses consistent with CGS subsection 15 and 16 of Section 22a-38.

Attachment K: Environmental Report *(not required for Flood Management Certification)*

Submit as Attachment K, a report and supporting documentation evaluating, as applicable, the effects of the proposed activity on wetlands (functions and values), fish and wildlife resources (habitats and populations), state and federal endangered and threatened species and state species of special concern, stream flows, state water quality standards and designated uses of waters of the state, public water supplies, wastewater treatment needs, the capacity of waters to assimilate wastes, ground water recharge/discharge, ground water availability, private and public water supply wells, agriculture, and water-based recreation.

The evaluation of project effects by the applicant should be based upon but not limited to, the following as applicable:

- instream flow studies;
- vegetation surveys;
- wetland and soil delineations;
- wetland function and value assessments;
- systematic habitat and biological field sampling;
- habitat mapping and habitat evaluations;
- fish and wildlife surveys and population census;
- natural resource inventories, which include natural resource value and impact assessments;

- field surveys for the presence of state and federal species listed as endangered or threatened and for species listed by the state as species of special concern;
- water quality modeling and analyses;
- waste load allocation modeling and analyses;
- water quality testing and evaluations.

All data collection and studies must be performed in accordance with valid and accepted scientific methods, and should identify the following:

- the existing biological, ecological and geological characteristics of all potentially affected areas;
- the nature and extent of any short-term and long-term effects of the proposed activity on such characteristics; and
- the nature and extent of any cumulative effects of the proposed activity on such characteristics.

“Cumulative effects” means the effects of the proposed activity in conjunction with the effects of previous activities and any known future activities proposed in the area by the applicant or by others of record.

Low Flow Analysis

In the case of a proposed water diversion, a description and analysis of expected low flow hydraulic effects of the proposed activity, using the following stream flow durations: seven-day ten-year, seven-day two-year, thirty-day two-year, and annual average flow. Information regarding the determination of streamflow durations can be found in Connecticut Water Resource Bulletins, which are available from the DEP Maps and Publications Office. See the "Available Resources" section at the end of these instructions for a list of Connecticut Water Resource Bulletins. Also include a description of the design requirements, if any, for concentrating low flows to facilitate passage of fish and wildlife, and to protect water quality.

Consultants selected to evaluate specific environmental factors must be appropriately

qualified. The evaluations must be adequately documented and include all data, studies, reports and analyses necessary to sustain the conclusions of the evaluations. The name(s) of the individual(s) performing the evaluations and a summary of his or her (their) qualifications should also be provided.

Failure to adequately and candidly perform and document the evaluation of environmental effects may result in the delay in processing, or denial of, your application.

Attachment L: Mitigation Report *(not required for Flood Management Certification)*

Note: Applicants are strongly advised to consult with biologists in DEP's IWRD prior to developing or incorporating mitigation plans.

Submit as Attachment L, a mitigation report describing any design elements of the proposed activity which have been incorporated into the plans intended to mitigate wetland, wildlife and fish habitat impacts resulting from the construction and/or operation of the proposed activity. Details of these design elements, including any plans, drawings, and reports, should be included in this attachment.

Regulated activities should be designed to avoid environmental impacts. Environmental impacts that are unavoidable should be minimized. Where unavoidable environmental impacts occur from the construction and/or operation of the proposed activity, mitigation or compensation for adverse impacts to wildlife and fish habitat, wetlands, watercourses, waterbodies and other natural resources should be incorporated into project plans.

Attachment M: Alternatives Assessment *(not required for Flood Management Certification)*

All permit applicants should submit as Attachment M, an alternatives assessment consisting of an analysis of alternatives to the proposed activity and documentation that the proposed activity is the least environmentally damaging alternative for fulfilling the basic objective(s) of the applicant. This analysis

should consider alternatives which might enhance environmental quality or have a less detrimental effect on the environment than the proposed activity and must demonstrate that there is no *feasible* and *prudent* alternative that will have a less environmentally damaging effect.

State agency permit applicants seeking DEP approval of their Flood Management Certification should submit an alternative assessment consisting of an evaluation of flood-proofing and other practical alternatives to constructing flood and erosion control structures.

An alternative is *feasible* if it is consistent with sound engineering principles. That is, if the applicant can successfully construct or implement the alternative, it is a feasible alternative. An alternative is *prudent* if it is economically reasonable in light of the benefits the activity would provide, but cost alone does not render an alternative imprudent.

The analysis should evaluate at least the following alternatives:

- taking no action;
- postponing action pending further study;
- taking actions of a different nature; and
- conducting the proposed activity at a different location.

To support the analysis of alternatives, documentation must be provided that demonstrates that the proposed activity is:

- necessary;
- the least environmentally damaging design; and
- proposed to take place in the least environmentally damaging location.

This documentation must include, at a minimum, identification and analysis of alternative on-site configurations or designs and alternative off-site locations for the project, and the reasons, including environmental effects and cost factors for each alternative considered, why such alternative designs,

configurations, and locations were rejected by the applicant. The on-site alternatives must be shown schematically on a drawing or plan in relation to the proposed activity.

Attachment N: Applicant Compliance Information Form

(Note: Applicants for Flood Management Certification Approval are not required to submit the Applicant Compliance Information.)

CGS Section 22a-6m provides for DEP review of an applicant's record of compliance with the environmental laws of Connecticut, any other state and the federal government. Under the law, DEP may consider the applicant's environmental compliance record, as well as the record of the applicant's principals and any parent companies or subsidiaries, when reviewing a permit application. All permit applications for activities not previously permitted by DEP must include a completed *Applicant Compliance Information Form* (DEP-APP-002) as Attachment N.

Attachment O: Applicant Background Information *(not required for Flood Management Certification)*

All permit applications must include as Attachment O, a completed *Applicant Background Information Form* (DEP-APP-008).

Attachment P: Coastal Consistency Review Form

Activities within the state's coastal area must be consistent with the Connecticut Coastal Management Act (CGS Sections 22a-90 through 22a-112). You may be required to complete a *Coastal Consistency Review Form* (DEP-APP-004) to demonstrate that the activity is consistent with the standards and policies of the Connecticut Coastal Management Act. Please refer to the instructions in Part IV, item 2, to determine if this requirement pertains to you.

Attachment Q: Other Information

Submit as Attachment Q, any other information deemed relevant by the applicant or required by DEP.

Available Resources

Below is a list of sources for information that may be required for this application. Much of this material may also be available at your local town hall or library. Both DEP Maps and Publications 860-424-3555 and the DEP File Room 860-424-4108 are located on the store level at 79 Elm Street, Hartford, CT. Please call the appropriate office in advance for hours of operation.

- Coastal Boundary Areas: Town Hall and/or DEP Maps and Publications; “Coastal Boundary Map”
- USGS Topographic Quadrangle Maps: DEP Maps and Publications, 860-424-3555 or USGS Office, 303-236-7477
- Endangered or Threatened Species Areas: DEP File Room, 860-424-4108; “State and Federal Listed Species and Natural Communities”
- Dams: DEP Bulletin No. 36 "Guidelines for Inspection and Maintenance of Dams": DEP's IWRD Office, 860-424-3019
- "DEP Guidelines for Emergency Operation Plans": DEP's IWRD Office, 860-424-3019
- Drinking Water Supply Wells and Reservoirs: Town Hall and/or DEP Maps and Publications; “Community Water Systems Map” (private wells not shown)
- Soil Series Description and Delineation: County Soil and Water Conservation District Offices and the United States Department of Agriculture Conservation Service Office
- 2002 Connecticut Guidelines for Soil Erosion and Sediment Control (Bulletin 34): DEP Maps and Publications
- 2004 Connecticut Guidelines for Stormwater Quality Management, DEP website
http://www.dep.state.ct.us/wtr/stormwater/strm_wtrman.htm
- Flood Insurance Rate Maps: Town Hall
- National Flood Insurance Program (NFIP) information: municipal engineering or Town Clerk offices, from the FEMA Map Distribution Center (800-358-9616), or from the FEMA Flood Map Store at <http://www.fema.gov/fhm/>
- **Drainage:**
Drainage Basins: “Natural Drainage Basins in Connecticut” map dated 1981; DEP Maps and Publications;

Connecticut Department of Transportation
Drainage Manual 2000: CT website;
www.CT.gov

Nosal, T. 1997. Gazetteer of Drainage Areas of Connecticut. Water Resources Bulletin No. 45. Connecticut Department of Environmental Protection, Natural Resources Center, Geographic Information Center.
- SCEL Maps: Town Clerk’s Office and DEP's IWRD Office, 860-424-3019
- **Streamflow:** The following list of bulletins are available at DEP Maps and Publications;
Cervione, M. A., R. L. Melvin and K. A. Cyr. 1982. A Method for Estimating the 7-Day, 10-Year Low Flow of Streams in Connecticut. Connecticut Water Resources Bulletin No. 34. Prepared by U.S. Geological Survey in Cooperation with Connecticut Department of Environmental Protection.

Weiss, L. A. 1983. Evaluation and design of a Streamflow-Data Network for Connecticut. Connecticut Water Resources Bulletin No. 36. Prepared by U.S. Geological Survey in Cooperation with Connecticut Department of Environmental Protection.

Cervione, M. A. 1982. Streamflow Information for Connecticut with Applications to Land-Use Planning. Connecticut Water Resources Bulletin No. 35. Prepared by U.S. Geological Survey in cooperation with Connecticut Department of Environmental Protection.

- Additional Water Resources Information, Data, Publications, etc. is available through the following web addresses:

USGS Water Resources of the United States
<http://water.usgs.gov/>

USGS Water Resources Division – Connecticut
<http://ct.water.usgs.gov/>

USGS Techniques of Water-Resources Investigations Reports may be obtained from
<http://water.usgs.gov/pubs/twri/>

- Pollution Prevention: A variety of pollution prevention publications are available from the Office of Pollution Prevention, 860-424-3297
- US Army Corps of Engineers
 - ♦ Regulatory Program
<http://www.usace.army.mil/inet/functions/cw/cecwo/reg/>
 - ♦ New England District, Regulatory Office
696 Virginia Road
Concord, MA 01742-2751
www.nae.usace.army.mil
800-343-4789; 978-318-8335; 978-318-8338
 - ♦ Wetlands Regulatory Assistance Program
<http://el.erdc.usace.army.mil/wrap/wrap.html>

- State and federal statutes and regulations are available for review at various locations:
 - ♦ State Library (Hartford)
 - ♦ University of Connecticut Law School (Hartford)
 - ♦ Yale University Law School (New Haven)
 - ♦ Superior Courthouse Libraries (located throughout the state)
 - ♦ Federal Code
<http://www.gpoaccess.gov/uscode/browse.html>
<http://www.access.gpo.gov/nara/cfr/cfr-table-search.html>
 - ♦ Code of Federal Regulations
<http://www.gpoaccess.gov/cfr/index.html>
 - ♦ Laws, Regulations, Policy, Guidance and Legislation (US EPA Web Site)
<http://www.epa.gov/water/laws.html>
<http://www.epa.gov/owow/wetlands/regs/index.html>

Figure A: Inland Water Resources Example

USGS Quadrangle Map: Clinton
Map Scale: 1:24,000 (1"=2,000')

Boundary of site

Areas of regulated activities on site

Proposed well field (with site boundary)

Proposed well (site boundary too small to show)

Project area

Multiple project areas

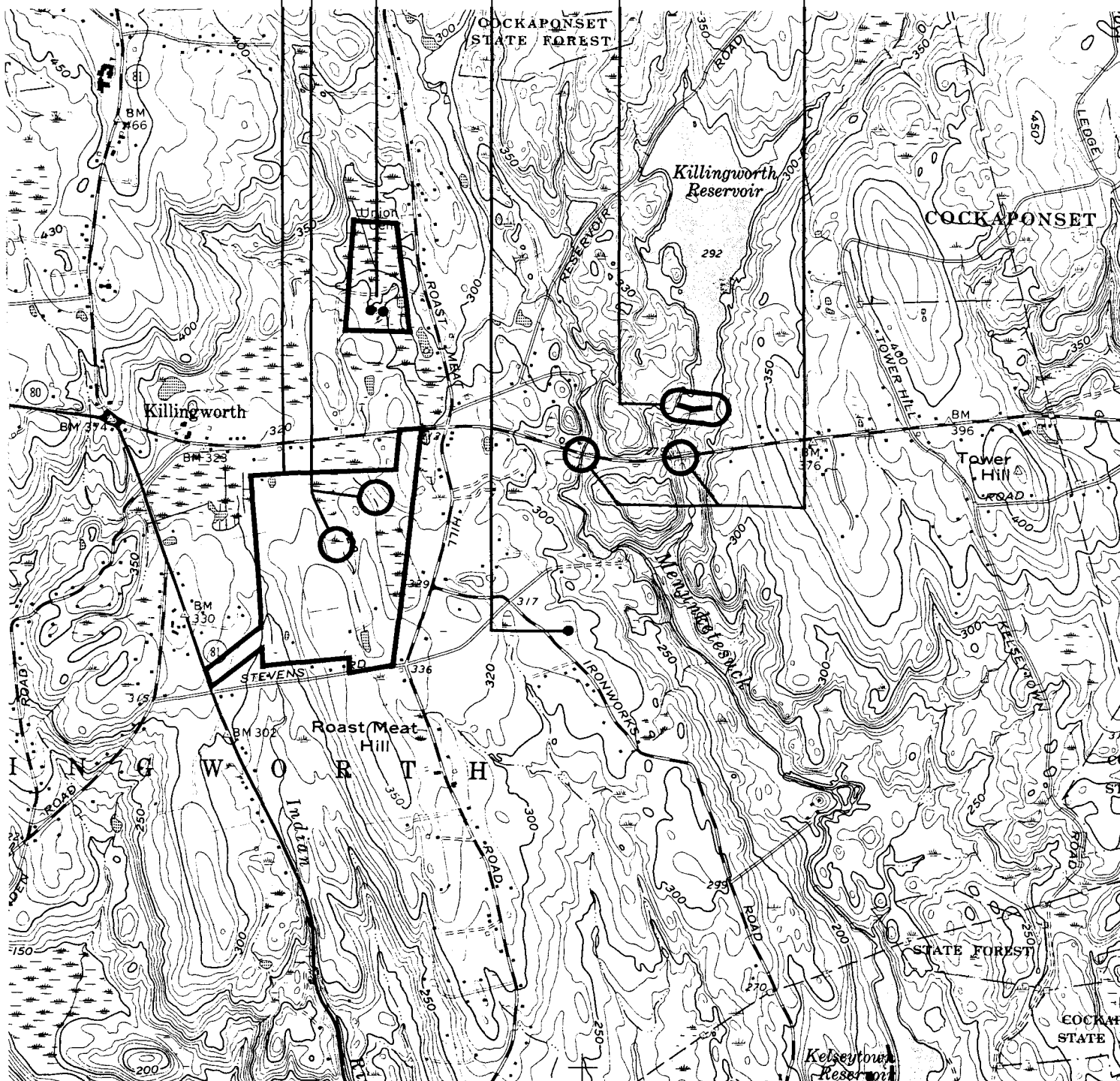


Table 1: Programs Administered by the Inland Water Resources Division

The following table lists the attachments required for each permit application.

Form and Attachments	Inland Wetlands and Watercourses Permit	Stream Channel Encroachment Line Permit	401 Water Quality Certification	Water Diversion Permit	Dam Construction Permit	Flood Management Certification Approval
Permit Application Form	X	X	X	X	X	X
Attachment A: Executive Summary	X	X	X	X	X	X
Attachment B: USGS Topographic Quadrangle Map	X	X	X	X	X	X
Attachment C: Documentation Form for Inland Wetlands and Watercourses Permit, SCEL Permit, and 401 Water Quality Certification	X	X	X			
Attachment D: Documentation Form for Water Diversion Permit				X		
Attachment E: Documentation Form for Dam Construction Permit					X	
Attachment F: Documentation Form for Flood Management Certification (<i>for state agencies only</i>)						X
Attachment G: Plan Sheets and Drawings	X	X	X	X	X	X
Attachment H: Engineering Documentation Part 1: Engineering Report Checklist and Report and Part 2: Hydrologic and Hydraulic Consistency Worksheet	X	X	X	X	X	X
Attachment I: Flood Contingency Plan	X	X	X	X	X	X
Attachment J: Soil Scientist Report	X	X	X	X	X	
Attachment K: Environmental Report	X	X	X	X	X	
Attachment L: Mitigation Report	X	X	X	X	X	
Attachment M: Alternatives Assessment	X	X	X	X	X	
Attachment N: Applicant Compliance Information Form	X	X	X	X	X	
Attachment O: Applicant Background Information	X	X	X	X	X	
Attachment P: Coastal Consistency Review Form	X	X	X	X	X	X
Attachment Q: Other Information	X	X	X	X	X	X